

turn up elsewhere in the Potomac. The localities known at present are all to the west of the Blue Ridge Mountain, that is to say, within the Great Alleghany Valley and the Alleghany Mountains."

Perhaps the above prediction has been realized in a specimen found at Great Falls, Md., by Mr. Manly D. Barber of Knoxville, Tennessee, in Sept. 1915. At that time Mr. Barber brought to the National Museum a basketful of naiades which he had collected the same day at Great Falls, about 18 miles above Washington. Among the shells, which were mostly dead ones, was a specimen of *cohongoronta*, dead, but in a fine state of preservation and with the periostracum nearly unblemished except for the usual erosion at the beaks. Its appearance indicated that it had been recently alive and that its home had been in the immediate vicinity of the place in which it was found. Had it been washed down from Harper's Ferry, some 50 or more miles above Great Falls it probably would have shown ill effects from so long a journey.

When found the two valves were separated, but so accurately do they fit together that it is evident they belong to the same individual. The fact that the valves were separated and yet were found near each other is additional (though not conclusive) evidence that they had not been transported any great distance by currents. At any rate this is the first recorded finding of the species in the Potomac River so far south as Great Falls.

The specimen is rather a small one. It measures, length 71 mm.; height 47 mm.; diameter 28 mm. It is in the collection of the U. S. National Museum, catalogue number 273834.

COLLECTING DAYS ABOUT THE NAVAL STATION,
GUANTANAMO BAY, CUBA.

BY JOHN B. HENDERSON.

In March last, while waiting for a boat to take us to Haiti, Dr. Bartsch and I spent nearly three weeks at the U. S. Naval Station at the entrance to Guantanamo Bay. We employed our

time in exploring the country about and subjecting it to a high degree of intensive collecting. In this eastern corner of Cuba the coastal strip of some ten miles in width is a semi-arid region with a complex of mountains that are either quite bare of trees or, at most, covered with a scrub forest and low-growing spiny shrubs, with, here and there, a wealth of cacti that almost suggests Lower California. The rock foundation of all this region,—barring some shore strips of very recently elevated coral, is everywhere composed of about everything in the line of rocks except limestone. This is a condition that in the Antilles usually spells disappointment and failure to the snail hunter. North of the big bay and then across several miles of low flat country, just where the foothills of the sierras begin, lies the city of Guantanamo, interesting to us as the home of Charles Ramsden, the naturalist. Just north of Guantanamo is a great rampart of high limestone mountains which beckon most alluringly to the collector. Sections of this rampart, somewhat arbitrarily marked off, are the “Monte Verde,” the “Monte Toro” and the “Monte Libano” of classic fame in Cuban Natural History.

In company with Ramsden we spent a wonderful day on nearby Monte Libano but a revolution that was then devastating the province and filling the land with incendiaries and bandits drove us out of this richer field and obliged us to confine our attentions thereafter to the arid country lying within the safer limits of the Naval Station,—some fifty square miles upon which Uncle Sam holds a long lease.

It seems to be a natural law that arid or desert lands support but few species of snails, but that these few species exist in great numbers and that they take on a very considerable range of variation. All this is perfectly true of this region. We were constantly amazed by the great number of specimens to be found; and each day of exploration in some new valley or over some range of hills added even greater figures of abundance to our already astonishing records.

The “prevailing” snail of this region is *Cepolis ovumreguli* Lea. Its shell is very suggestive of the true helix of Spain or Algeria of the *lactea* group. The variation is exceedingly great

in color, size and shape, and it would make a dozen excellent species if the intermediates were left out of account. Those living near the coast and among the cacti of the most arid parts of the district are of whiter and more dull color, are more banded and show a decided tendency to abnormalities, especially about the apertures. Specimens from further inland are more polished and shining, even as though varnished, and are much more given to a dotted or fly-specked type of ornamentation than to bands. A fence-post or a dead tree-limb with a hundred specimens closely assembled in aestivation was no unusual sight. We learned finally to pay no attention to them. Upon the low bushes in certain localities the lovely little *Cepolis lucipeta* Poey cling like berries. These are the largest and finest of the species I have ever seen. The range of color variation in this delightful little snail is also very great, but the colors never blaze out in the vivid flash of the *Polymita*. The blues and purples and chestnut browns are subdued but very rich and splendid. One very noticeable color form is the subsp. *velasqueziana* of Poey where the many broken bands of the type coalesce into two broad bluish-black zones of solid color.

As nearly all the vegetation of this dry region bears thorns we did not at first discover that many of these thorns were in reality *Macrocerami*. When we did find this out we could see nothing else. Bartsch and I finally agreed, and shook hands upon it, that we would gather no more of them, and a stiff penalty was placed upon any violation of the compact. Two hundred and more from one bush is an earlier record before we really got started. This is the *Macroceramus festus* (Gundl.) Pfr., blue and yellow and buff in color. Another arboreal snail of this section is *Polymita versicolor* Born and it is probably very abundant in places although we never saw more than fifteen or twenty on any one tree. This is to me the least attractive species of that wonderful genus of richly painted snails. The brilliant yellow and pink are too primitive and the two colors do not seem to harmonize very well. It always impresses me as an experimental species that was laid aside in nature's laboratory as not wholly a success.

There were some ground snails too, but to secure living ones

required much grubbing up of tufts of tall grass and shaking out their roots, like digging up miniature potatoes. These are the *Annularia putris* (Gundl.) Pfr. and the *Chondropoma marginalbum* Gundl.) P fr., the latter apparently quite rare. There are no minute things beyond some few *Thysanophora inaguensis* Weinland.

Some days we spent gathering marines on the little pebbly beaches hidden far down under the lofty cliffs that mark this rugged shore line, and we obtained some unusual species washed up from the exceedingly narrow island-shelf; blue water is but a few hundred yards out. Among these are some *Conus cedo-nulli* Lam. Beach collecting is, however, an aggravation; and too much of it becomes a misdemeanor in the collector's ethical code, for it obliges an acceptance of something short of the best.

AMNICOLIDÆ FROM ONEIDA LAKE, N. Y.

BY HENRY A. PILSBRY.

The New York College of Forestry, under the direction of Professor Hugh P. Baker, is carrying on a biological survey of Oneida Lake and has issued an interesting bulletin¹ upon the relations of mollusks to fish, by Frank C. Baker. Some *Amnicolidæ* obtained during this work, and subsequent to the preparation of the bulletin were submitted to the writer. The collection proves to be of considerable interest, including some species not before noticed.

AMNICOLA BAKERIANA, n. sp.

The shell is umbilicate, turritid-conic, thin, whitish-corneous, somewhat translucent, with unevenly developed striation, dis-

¹The relations of mollusks to fish in Oneida Lake. By Frank Collins Baker. Technical Publication No. 4, New York State College of Forestry at Syracuse University. Pp. 366. Syracuse, N. Y., 1916. We are informed that it may be obtained free by those interested in the study of Mollusca by applying to the dean of the college, Dr. Hugh P. Baker.